

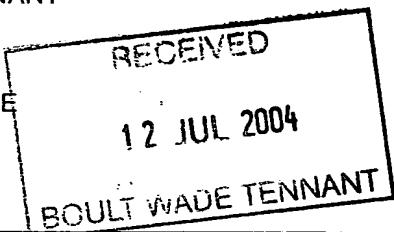
PATENT COOPERATION TREATY

REC'D 12/7/04
NO

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

08.07.2004

Applicant's or agent's file reference
TAB/60238/001

IMPORTANT NOTIFICATION

International application No.
PCT/GB 03/02625International filing date (day/month/year)
19.06.2003Priority date (day/month/year)
19.06.2002Applicant
DE LA RUE INTERNATIONAL LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/B/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:

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PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TAB/60238/001	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/02625	International filing date (day/month/year) 19.06.2003	Priority date (day/month/year) 19.06.2002
International Patent Classification (IPC) or both national classification and IPC G09F3/10		
Applicant DE LA RUE INTERNATIONAL LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.
 - This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:
 - I Basis of the opinion
 - II Priority
 - III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV Lack of unity of invention
 - V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI Certain documents cited
 - VII Certain defects in the international application
 - VIII Certain observations on the international application

Date of submission of the demand 20.10.2003	Date of completion of this report 08.07.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Whittington, J Telephone No. +49 89 2399-2781



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No.

PCT/GB 03/02625

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

- 1, 4-9 as originally filed
2, 2a, 3 received on 24.06.2004 with letter of 23.06.2004

Claims, Numbers

- 1-22 received on 24.06.2004 with letter of 23.06.2004

Drawings, Sheets

- 1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
 - the language of publication of the international application (under Rule 48.3(b)).
 - the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority in written form.
 - furnished subsequently to this Authority in computer readable form.
 - The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
 - the claims, Nos.:
 - the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/02625

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N) Yes: Claims 1
No: Claims

Inventive step (IS) Yes: Claims 1
No: Claims

Industrial applicability (IA) Yes: Claims 1
No: Claims

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/02625

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1). Reference is made to the following documents:

- D1: FR-A-2 784 779 (AVERY DENNISON CORP) 21 April 2000 (2000-04-21)
- D2: DE 100 17 141 A (SCHREINER GMBH & CO KG) 11 October 2001 (2001-10-11)
- D3: FR-A-2 803 938 (GOUZY S A) 20 July 2001 (2001-07-20)

2). The present invention relates to security improvements in paper, and more specifically to security elements embedded within the paper itself. The object of the invention is to provide a security element associated with a piece of paper which is tamper proof - i.e. cannot be easily removed - and which combines the advantages of a conventional "tear tape" with those of a security label. The principal of a tear tape is that it destroys the packaging/paper substrate onto which it is applied when removed therefrom, whereas security labels/elements typically provide identification aspects. By embedding a security element into paper which causes part of the paper to be destroyed/removed when a tearing force is applied thereto (i.e. the strength of the element supersedes that of the paper, as in a tear tape), the combined advantages are realised.

3). D1 describes a tear strip as part of a piece of paper, created by two lines of perforations. D2 describes an information label with foil protected portions for use in painting applications. D3 describes a three-part adhesive label for removably attaching two articles together. None of the documents D1-D3 disclose or suggest embedding a security element into paper which causes part of the paper to be destroyed/removed when a tearing force is applied thereto.

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packaging. Sometimes printed information is applied to the tear tapes, such as the name of the goods or opening instructions.

5 Tear tapes, however, are never incorporated into paper in the same manner as security elements. Instead, they are applied to the surface of the packaging as a subsequent conversion process.

10 FR-A-2784779 describes a label which has a tampering resistant band. The band forms part of the label itself and can be torn away from the rest of the label. The label is affixed to a tube or pill dispenser which is closed by a lid such that the tear-off strip covers the joint between the lid and the tube. In order to open the tube it is necessary to tear off the band, revealing the primary opening of the package.

20 DE-A-10017141 describes an information carrier which is intended for use in the motor vehicle industry. This has a base layer bearing printed information and it at least two film pieces detachably disposed on the base layer above the printed information.

FR-A-280393A also describes a tamper proof label which is removable part of the label itself.

30 It is an object of the present invention to combine the concepts of secure labels and tear tapes to provide paper, which can be used for making packaging or labels, which has a removable element either to provide evidence of tampering or to provide a vehicle for verification.

- 2a -

The invention therefore provides paper having first and second opposing surfaces, and an elongate element, such that when a tearing force is applied to the elongate element, a removable portion is separated
5 from the rest of the paper characterized in that the element is a security element having at least one verifiable authenticating feature, and the security element is at least partially embedded with in the paper.

10

The invention will now be described, by way of example only, with reference to the accompanying drawings in which:-

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Figure 1 is a plan view of a label made from paper according to the present invention;

Figure 2 is a plan view of a alternative label to that shown in Figure 1; and

20

Figure 3 is a pictural representation of the label of Figure 2 applied to a bottle.

A label 10 made from paper according to the

25

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present invention is illustrated in Figure 1 and consists of a paper substrate having two opposing surfaces. A first surface can be used for bearing printed information or indicia and the second surface 5 has a layer of an adhesive applied thereto. A suitable adhesive would be Pressen 1456 or National DT 38-3624, which are hot melt and are pressure sensitive adhesive respectively although the adhesive used would very much depend on the intended use of the 10 label. An elongate flexible security element or thread 11 is wholly embedded within the paper layer as shown in Figure 1. Alternatively it may be only partially embedded so that it is exposed in windows at the first surface. A suitable methods of embedding 15 security elements 11 is described in EP-A-0059056, EP-A-070172, EP-A-0687324, EP-A-0625431, EP-A-0229645 and EP-A-0860298. A typical paper weight for a label containing a security element is 90gsm, although a person skilled in the art would recognise that a wide 20 range of paper weights could be used.

In the example shown in Figure 1 it is intended that the security element 11 can be used to remove a portion 12 from the label 10 between the two lines of 25 perforations 13. To enable this to occur, the adhesive is applied to the second surface of the paper layer only in the regions outside the perforation 13. Additionally, the paper substrate includes a small tab 14 projecting from one edge of the label 10 30 surrounding one end of the elongate element 11.

Thus, when the label 10 is applied to a surface 15, for example the side of the package, a bottle, or the like, it only adheres to the surface 15 in the regions outside the removable portion 12. To remove 35 the removable portion 12, a user grasps the tab 14 and pulls it backwards and upwards. As the security

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CLAIMS:-

1. Paper (10) having first and second opposing surfaces, and an elongate element (11) such that when
5 a tearing force is applied to the elongate element (11), a removable portion (12) is separated from the rest of the paper (10) characterized in that the element (11) is a security element (11) having at least one verifiable authenticating feature, and the
10 security element (11) is at least partially embedded with in the paper (10).

2. Paper (10) as claimed in claim 1 in which the removable portion (12) is the elongate element (11).
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3. Paper (10) as claimed in claim 1 in which the removable portion (12) comprises a section of the paper (10) and the elongate element (11).

20 4. Paper (10) as claimed in any one of the preceding claims in which the elongate element (11) is wholly embedded in the paper (10).

25 5. Paper (10) as claimed in any one of claims 1 to 3 in which the elongate element (11) is exposed at windows in the first surface of the paper (10).

30 6. Paper (10) as claimed in any one of claims 1 to 3 or 5 in which one side of the elongate element (11) is wholly exposed across the full width of the paper (10).

35 7. Paper (10) as claimed in any one of the preceding claims further comprising at least one line of perforations (13) separating the removable portion (12) from the rest of the paper (10).

8. Paper (10) as claimed in any one of claims 3 to 7 in which the removable portion (12) is an edge portion of the paper (10).

5 9. Paper (10) as claimed in any one of claims 3 to 7 in which the removable portion (12) comprises a middle section of the paper (10).

10 10. Paper (10) as claimed in any one of the preceding claims in which the removable portion (12) comprises legible indicia.

11. Paper (10) as claimed in claim 10 in which the legible indicia comprises printed information.

15 12. Paper (10) as claimed in claim 10 in which the legible indicia is formed from demetallised or metallised alphanumeric characters on the elongate element (11).

20 13. Paper (10) as claimed in any one of the preceding claims in which the elongate element (11) is machine readable.

25 14. Paper (10) as claimed in any one of the preceding claims in which the elongate element (11) incorporates an activatable security feature.

30 15. Paper (10) as claimed in any one of the preceding claims in which the elongate security element (11) comprises one or more of the same or different security features.

35 16. Paper (10) as claimed in any one of the preceding claims in which an end of the elongate element (10) is enclosed in a tab (14) projecting from an edge of the

paper.

17. Paper (10) as claimed in any one of claims 1 to
15 in which an end of the elongate element (11) is
5 exposed in a cut out portion at an edge of the paper
(10).

18. A label (10) made from paper according to any one
of the preceding claims.

10

19. A label (10) as claimed in claim 18 further
comprising an adhesive applied to at least a portion
of the second surface of the paper (10), such that
when the label (10) is adhered to the surface and a
15 tearing force is applied to the elongate element (10),
a removable portion (12) is separated from the rest of
the label (10).

20

20. A label (10) as claimed in claim 19 in which no
adhesive is applied to the second surface in the
region of the removable portion of the label (10).

25

21. A label (10) as claimed in claim 19 in which a
low tack adhesive is applied to the second surface of
the removable portion of the label, said adhesive
being of a lower tack than the adhesive applied to
other parts of the second surface of the paper (10).

30

22. Packaging made from paper (10) as claimed in any
one of claims 1 to 17.